is respectfully requested in light of these amendments and the following remarks.

I. Rejection of Claim 2 under 35 U.S.C. § 112, first paragraph

The rejection of claim 2 under 35 U.S.C. § 112, first paragraph, has been maintained. The Examiner suggests that this claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected. to make and/or use the invention. The Examiner suggests that Applicants' assertion that the antibodies are commercially available from Maine Biotechnology is not acceptable. Instead, the Examiner has indicated that the Office will accept commercial availability as evidence that a biological material is known and readily available only when the evidence is clear and convincing that the public had access to the material. The Examiner suggests that a product could be commercially available but only at a price that effectively eliminates accessibility to those desiring to obtain a sample. Further, the Examiner suggests that the relationship between applicant relying on a biological material and the commercial supplier is one factor that would be considered in determining whether the biological material was

known and readily available.

Accordingly, in an earnest effort to advance the prosecution of this case, Applicants are providing herewith evidence demonstrating the commercial availability of the MAC2-158 and MAC2-48 antibodies at a reasonable price allowing accessibility to these products.

With respect to the CD163 detection antibody RM3/1 antibody, while this antibody was commercially available as of the filing date of the application, it has since been taken off the market. Accordingly, Applicants have amended claim 2 to delete reference to this specific antibody. However, as evidenced by the published reference by Matsushita et al., a copy of which is being provided herewith, other CD163 detection antibodies such as R20 are known. Further, CD163 detection antibodies such as R20 are commercially available at a reasonable price. Evidence of the commercial availability of the R20 antibody at a reasonable price allowing accessibility is provided herewith.

Withdrawal of the rejection of claim 2 under 35 U.S.C. § 112, first paragraph, is therefore respectfully requested in light of the evidence of commercial availability provided and the amendments to claim 2.

II. Rejection of Claims 1-4 under 35 U.S.C. § 103(a)

The Examiner has also maintained the rejection of claims 1-4 under 35 U.S.C. § 103(a) as being unpatentable over Coligan et al. (Current Protocols in Immunology, Green Publishing Associates and Wiley Interscience, New York 1991, pages 2.1.1-2.1.3, 2.1.9-2.1.11, and 2.1.17-2.1.22) in view of U.S. Patents 5,077,216 and Zwadlo et al. (IDS Reference BA) and the known fact disclosed in the specification on page 4, paragraph 1. The Examiner suggests that it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the antibodies taught in the '216 patent as capture antibodies and the antibodies taught by Zwadlo et al. as the detection antibody in the ELISA taught by Coligan et al. to have a method for detecting the presence of CD163 in a biological sample. Further, the Examiner suggests that one of ordinary skill in the art would have been motivated to substitute the antibodies taught by the '216 patent and Zwadlo et al. in the ELISA taught by Coligan et al. to detect and monitor CD163 because Coligan et al. teaches that the Antibody/Sandwich ELISA is very sensitive and monitoring the course of an inflammatory condition by detecting CD163 such as in rheumatoid arthritis is

important as taught by Zwadlo et al.

Applicants respectfully traverse this rejection.

At the outset, Applicants respectfully disagree with the Examiner's characterization of the teachings of Zwadlo et al. Contrary to the Examiner's suggestion, Zwadlo et al. does not teach monitoring the course of an inflammatory condition such as rheumatoid arthritis by detecting CD163. Instead, this reference teaches that the RM3/1 macrophages increase during the healing phase and decrease during onset of inflammation. See Discussion at page 303. In fact, in the Abstract, Zwadlo et al. conclude that the antibody RM3/1 specifically detects a macrophage phenotype which seems to be associated with the healing phase of the inflammatory process.

In contrast, in the instant application, it is taught for the first time that an CD163 acts as early signaling event in an inflammatory response cascade and thus is useful in monitoring for the presence of an inflammatory condition and/or monitoring the course of an inflammatory condition. Detection of CD163 to monitor the course of an inflammatory condition is clearly unexpected in light of teachings of Zwadlo et al. that the macrophage phenotype detected by antibody RM3/1 is associated with only the healing phase of the inflammatory process.

Other prior art references cited in this rejection also provide no teaching or suggestion of CD163 levels being useful in monitoring an inflammatory response cascade nor in monitoring for the presence of an inflammatory condition and/or monitoring the course of an inflammatory condition.

Coligan et al. teaches general methods for conducting ELISAs. This reference contains no teachings whatsoever with respect to CD163.

The '216 patent discloses antibodies against p155 and their use in targeting phagocytic cells against a desired antigen and for determining and monitoring the biological activity of interferons in an individual. Accordingly this reference also fails to provide any teaching or suggestion of CD163 acting as an early signaling event in the inflammatory response cascade or monitoring for the presence of an inflammatory condition and/or monitoring the course of an inflammatory condition via CD163 detection.

Accordingly, in an earnest effort to advance the prosecution of this case and to clarify differences of the present invention from the prior art teachings, Applicants have amended claim 1 to be drawn to a method for monitoring an inflammatory response cascade in a patient by detecting levels of CD163 in a biological

sample from the patient. Claim 4 has been canceled in light of the amendments to claim 1. Support for these amendments can be found in the specification at page 11, lines 13-14. Accordingly no new matter is added by these amendments and entry is respectfully requested.

As the cited combination of references neither teaches nor suggests all the limitation of the claims as amended, the cited combination of prior art cannot render obvious the instant claimed invention. Withdrawal of this rejection under 35 U.S.C. § 103(a) is respectfully requested in light of the above arguments and the amendments to the claims.

III. Conclusion

Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The

attached page is captioned "**VERSION WITH MARKINGS TO SHOW CHANGES MADE**."

Respectfully submitted,

Kathleen A. Tyrrell
Registration No. 38,350

Date: **January 10, 2003**

Licata & Tyrrell P.C.
66 E. Main Street
Marlton, NJ 08053
(856) 810-1515

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Please cancel claim 4.

Please amend claims 1 and 2 as follows:

1. (amended) A method for ~~detecting the presence of CD163 in a biological sample~~ monitoring an inflammatory response cascade in a patient comprising:

a) contacting ~~the~~ a biological sample obtained from the patient with a CD163 capture antibody to form a CD163-antibody complex; ~~and~~

b) contacting the CD163-antibody complex with a CD163 detection antibody ~~so that levels of CD163 in the sample are detected~~; and

c) detecting CD163 levels in the biological sample to monitor the inflammatory response cascade in the patient.

2. (amended) The method of claim 1 wherein the CD163 capture antibody is MAC2-158 or MAC2-48 ~~and the CD163 detection antibody is RM3/1~~.